



### 3.3 Description of the Alternatives Selected for Detailed Study

The Preliminary Alternative Analysis and Screening Report, dated August 19, 2003 and detailed in Section 3.1, Preliminary Alternatives Analysis and Screening, recommended the following preliminary alternatives for further study in the Draft Environmental Impact Statement (DEIS):

- No-Build Alternative
- Alternative C (Freeway Alternative)
- Alternative E (Freeway Alternative)
- Alternative F (Freeway Alternative)
- Alternative G (Freeway Alternative)

Following the publication of the Preliminary Alternatives Analysis and Screening Report, information and comments were received at various meetings and from the project's website. The study team continued to collect and analyze data related to social and environmental impacts for each of the four preliminary freeway alternatives. Proposed lane configurations, interchange locations and configurations, overpass locations, more accurate proposed right-of-way limits, and revised construction cost estimates for each of the alternatives were developed.

As the field data and public and resource agency comments were analyzed and preliminary engineering further developed, a more accurate measure of social and environmental impacts of each of the alternatives was determined. A review of these socio-economic and environmental impacts raised concerns within the study team, resource agencies, and consulting parties involved with the project. Concerns focused around both socio-economic and environmental impacts, particularly related to wetland impacts, residential and business relocations, and historic property impacts.

To address these concerns, modifications in the four remaining freeway alternatives, Alternatives C, E, F and G, were investigated as detailed in Section 3.2. The goal of these modifications was to avoid and/or minimize impacts to the environment, residents, businesses and historic properties. Section 3.2.4 summarizes the recommendations of the modified alternatives as detailed in Section 3.2, Modifications of the Alternatives Recommended for Further Analysis, that resulted in the reasonable range of alternatives in the decision-making process being revised to include Alternatives Cs, Es and G-C.

Later in the study progress, during the DEIS Public Comment Period, comments received from the Indiana Department of Natural Resources (IDNR) requested a review of potential modifications to Alternative G-C north of Roosevelt Road to avoid impacts to natural resources. In response to this request and similar requests made by public comments, a "hybrid" alternative, Alternative G-E was developed. Alternative G-E, as discussed in Section 3.2.5, Evaluation of Hybrid Alternatives, was a hybrid alternative consisting of a combination of the southern portion of Preliminary Alternative G-C, from US 31 to Roosevelt Road, and the northern portion of Preliminary Alternative Es, from Roosevelt Road to US 20. Additional analysis indicated that the hybrid alternative resulted in a reduction of wetland impacts and avoidance of many high quality wetland complexes west of existing US 31, a reduction in forest impacts, was a good traffic performer, was an alternative that utilized more of the existing US 31 corridor and had relocation impacts and cost estimates that were consistent with the other alternatives being studied. Therefore, the range of reasonable alternatives in the decision-making process was expanded to include Alternative G-E as well as Alternatives Cs, Es and G-C.



Further attempts at avoidance and/or minimization of impacts were investigated as the study progressed. The last of these attempts that resulted in the reduction of impacts was therefore, incorporated into the study were modifications to both Alternative G-C and G-E, called G-Cs and G-Es. These modifications, as discussed in Section 3.2.6, Modifications to Alternatives G-C and G-E, involved a shift in alignment to the east in order to avoid a wetland complex that was located between the eastward extension of SR 4 (Pierce Road) and Miller Road, just south of New Road. This modification provided positive results as impacts to both the human and natural environments were further reduced. This included a slight reduction in residential relocations and further reductions to wetlands and forests. This particular avoidance/minimization measure also provided an opportunity to avoid the high quality wetland complex associated with both of the alternatives. Due to the positive results related to impact reductions seen by this shift in the alignments, Alternatives G-C and G-E were eliminated from further consideration and Alternatives G-Cs and G-Es were added to the range of reasonable alternatives in the decision-making process.

**Following the modifications made to the preliminary alternatives throughout the study process as detailed in Section 3.2, Modifications of Alternatives Recommended for Further Study, and the range of reasonable alternatives in the decision-making process was expanded to include the following alternatives (see Figure 3.3.28).**

- No-Build Alternative
- Alternative Cs (Freeway Alternative)
- Alternative Es (Freeway Alternative)
- Alternative G-Cs (Freeway Alternative)
- Alternative G-Es (Freeway “hybrid” Alternative)

### 3.3.1 No-Build Alternative

The No-Build Alternative includes “capacity expansion” projects in the South Bend Metropolitan Area (St. Joseph, Marshall and Elkhart counties) as reported in the MACOG Transportation Improvement Program (2003-2005 TIP) and the balance of Indiana as reported in the Indiana Statewide Transportation Improvement Program (INSTIP). Capacity expansion projects include major roadway investments, such as a major widening that add through traffic lanes, the extension of existing roadways or construction of new roadways, new interchanges, and major roadway realignments or reconstructions that add through traffic carrying capacity.

When capacity expansion projects that are programmed for construction or that have been completed since the year 2000 are added to the existing roadway network, the resulting roadway network constitutes the No-Build Alternative (or Existing-Plus-Committed Network). It is assumed that these committed improvements will be completed independent of any decision regarding the improvement of US 31 from Plymouth to South Bend.

The committed capacity expansion projects in St. Joseph and Marshall counties include:

- Bittersweet Road widening to four lanes from Vistula Drive to McKinley Highway
- SR 331 (Capital Avenue) widening from four to six lanes from Douglas Road to SR 23

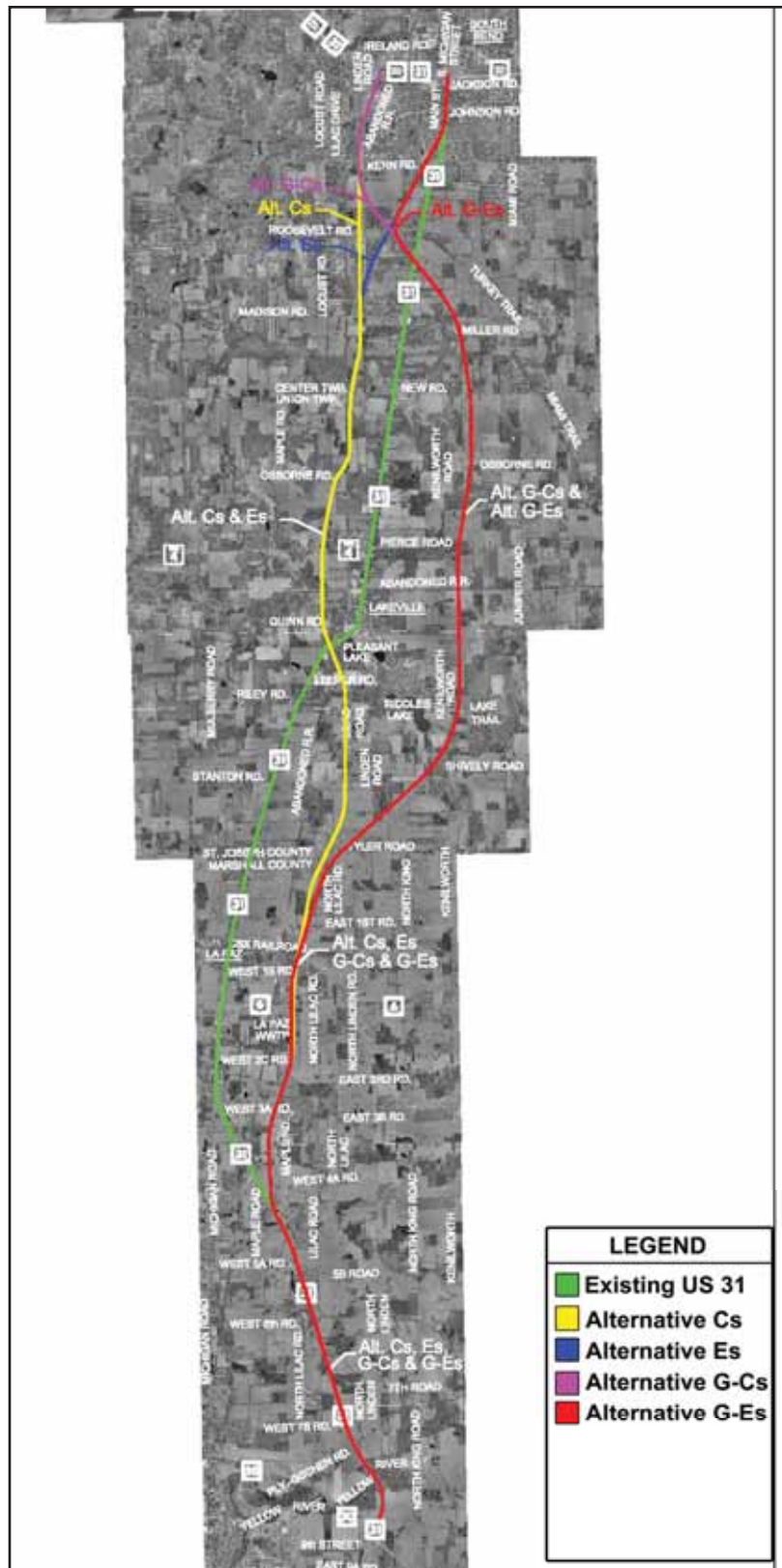


Figure 3.3.28: Preliminary Alternatives Cs, Es, G-Cs and G-Es



- SR 331 (Capital Avenue) extension of a six-lane divided arterial from Douglas Road to Day Road (recently completed)
- SR 331 (Capital Avenue) extension of a six-lane divided arterial from Day Road to Jefferson Boulevard
- SR 331 (Capital Avenue) extension of a six-lane divided arterial from Jefferson Boulevard to Harrison Road (12th Street)
- SR 331 (Capital Avenue) new construction as a six-lane divided arterial from Harrison Road (12th Street) to the US 20 Bypass
- SR 331 (Capital Avenue) widening from four to six lanes from Jackson Road to US 20
- Cleveland Road widening to four lanes from Brick Road to Bendix Drive
- Douglas Road widening to four lanes from SR 23 to west of Grape Road and from Main Street to Fir Road
- Gumwood Road widening to four lanes from Cleveland Road to Brick Road
- Harrison Road (12th Street) widening to four lanes from Merrifield Road to Fir Road
- Ironwood Road widening to four lanes from Ridgedale Road to Randolph Street (completed)
- Jefferson Boulevard widening to four lanes from Fir Road to Capital Avenue
- McKinley Highway widening to five lanes from Elder Road to Birch Road
- Miami Highway widening to four lanes from Kern Road to Jackson Road
- Portage Avenue widening to four lanes from Lathrop Drive to Toll Road
- SR 17 (N. Michigan Street in Plymouth) widening to five lanes from Klinger Street to US 30
- SR 23 (Edwardsburg Highway) widening to four lanes from Cleveland Road to Brick Road
- SR 23 widening to four lanes from Campeau Street to Edison Road

Along the US 31 corridor, INDOT has programmed traffic-operational improvements for intersections at Kern Road, Roosevelt Road, Madison Road, New Road and SR 4. The new traffic signal at New Road is the most significant of these “capacity preservation” projects. As these projects do not involve major capital investments that alter the through lane traffic-carrying capacity of US 31, these projects will proceed regardless of the decision to improve the US 31 corridor. On the other hand, a pavement-resurfacing project that would have added a continuous center left-turn lane along US 31 from Madison Road to Kern Road has been suspended until the completion of this NEPA document.



### 3.3.2 Alternative Cs (Freeway Alternative)

Alternative Cs begins at the existing US 31 and US 30 interchange, utilizing the existing cloverleaf configuration, and proceeds northward along the existing US 31 alignment to just south of West 4A Road in Marshall County, just south of LaPaz. It then continues northward on new alignment east of LaPaz and parallels existing US 31. Just south of Lakeville, in St. Joseph County, it crosses existing US 31 and continues northward, west of Lakeville, paralleling existing US 31. It terminates at US 20, approximately one mile west of the existing US 31 and US 20 interchange.

The proposed facility would require existing intersections and access points to be converted to interchanges, overpasses (grade-separations) or access closures. See Section 5.1, Traffic and Transportation, for a more detailed description of the alternative and associated access points.

It is anticipated that there will be five new interchanges along Alternative Cs, not including the use of the existing interchange at US 30 and US 31 or the modifications required at the existing US 31 and US 20 interchange. All anticipated interchange locations and types are conceptual and will be refined in later phases of the project development. Likely interchange locations and types would be:

- Utilize existing interchange at US 30
- Diamond interchange at the Marshall County proposed extension of 7th Road
- Diamond interchange at US 6 (with provisions for a potential future partial cloverleaf)
- Diamond interchange at SR 4 (Pierce Road)
- Diamond interchange at Kern Road
- Trumpet interchange at US 20
- Modify existing interchange at existing US 31 and US 20

There will be grade separations (overpasses) and local service (frontage) roads for many public roads intersecting with US 31 and not listed as a likely interchange location. It is anticipated that there will be 14 grade separations along Alternative Cs, including an additional reconstruction of the existing grade separation at Linden Road over US 20 due to the addition of ramp lanes along US 20 associated with the new interchange; however, the details of access will be refined as the project advances through the development phases. Likely grade separation locations would be:

- Plymouth-Goshen Trail
- Lilac Road/West 6th Road
- West 4A Road
- West 3A Road
- East 1st Road
- Tyler Road



- Leeper Road
- Existing US 31 just south of Lakeville
- Quinn Road
- New Road
- Madison Road
- Roosevelt Road
- Johnson Road
- Linden Road over US 20 reconstruction

There will be public roads that are not listed as a likely interchange or grade separation (overpass) locations. When two public roads are close to one another, a grade separation may be provided at one road and the other road relocated to use the same grade separation. Frontage or local service roads are provided where land may be landlocked by full access control of the alternative. It is anticipated that there will be four such public roads along Alternative Cs that will likely be relocated to an adjacent overpass. However, the details of access will be refined as the project advances through the development phases. Likely road relocation locations to an alternate site of access would be:

- Maple Road connection to existing US 31 near West 4A Road
- Maple Road connection to West 2C Road
- Quinn Trail connection to existing US 31
- Linden Road connection to Johnson Road

There will be public roads that are not listed as a likely interchange or grade separation (overpass) locations or listed as a road likely to be relocated to an alternate access point. Access across the new freeway for these roads will be eliminated and a cul-de-sac constructed on either side of the new freeway. It is anticipated that there will be seven such public roads along Alternative Cs; however, the details of access will be refined as the project advances through the development phases. Roadways likely to lose access and be terminated with a cul-de-sac would be:

- West 7B Road
- West 5A Road
- Existing US 31 near 4A Road
- West 2C Road
- West 1B Road





- Shively Road
- Osborne Road

In addition to the likely locations of interchanges, grade separations, and road closures, there would also be two grade separations for railroad crossings at the following locations:

- CSX Railroad on the north edge of LaPaz, between West 1B Road and East 1st Road
- Abandoned Railroad corridor just south of US 20

### 3.3.3 Alternative Es (Freeway Alternative)

Alternative Es begins at the existing US 31 and US 30 interchange, utilizing the existing cloverleaf configuration, and proceeds northward along the existing US 31 alignment to just south of West 4A Road in Marshall County, just south of LaPaz. It then continues northward on new alignment east of LaPaz and parallels existing US 31. Just south of Lakeville, in St. Joseph County, it crosses existing US 31 and continues northward, west of Lakeville, paralleling existing US 31. Just north of Madison Road the alternative assumes a northeasterly direction and ties into existing US 31 just north of Kern Road. It then terminates at the existing US 31 and US 20 interchange. It should be noted that Alternative Es between Kern Road and the US 31/US 20 interchange was modified, as discussed in Section 3.2.2.4, to be an “at grade” facility and not an elevated roadway, constructed on retaining walls as presented in the DEIS.

The proposed facility would require existing intersections and access points to be converted to interchanges, overpasses (grade-separations) or access closures. See Section 5.1, Traffic and Transportation, for a more detailed description of the alternative and associated access points.

It is anticipated that there will be four new interchanges along Alternative Es, not including the use of the existing interchange at US 30 and US 31 and the reconstruction of the existing interchange at US 31 and US 20. All anticipated interchange locations and types are conceptual and will be refined in later phases of the project development. Likely interchange locations and types would be:

- Utilize existing interchange at US 30
- Diamond interchange at the Marshall County proposed extension of 7th Road
- Diamond interchange at US 6 (with provisions for a potential future partial cloverleaf)
- Diamond interchange at SR 4 (Pierce Road)
- Diamond interchange at Kern Road
- Reconstruction of existing interchange at US 20

There will be grade separations (overpasses) and local service (frontage) roads for many public roads intersecting with US 31 and not listed as a likely interchange location. It is anticipated that there will be 16 grade separations along Alternative Es. However, the details of access will be refined as the project advances through the development phases. Likely grade separation locations would be:



- Plymouth-Goshen Trail
- Lilac Road/West 6th Road
- West 4A Road
- West 3A Road
- East 1st Road
- Tyler Road
- Leeper Road
- Existing US 31 just south of Lakeville
- Quinn Road
- New Road
- Madison Road
- Roosevelt Road
- Main Street
- Johnson Road
- Johnson Road bridge over Main Street
- Jackson Road

There will be public roads that are not listed as a likely interchange or grade separation (overpass) locations. When two public roads are close to one another, a grade separation may be provided at one road and the other road relocated to use the same grade separation. Frontage or local service roads are provided where land may be landlocked by full access control of the alternative. It is anticipated that there will be seven such public roads along Alternative Es that will likely be relocated to an adjacent overpass. However, the details of access will be refined as the project advances through the development phases. Likely road relocations to an alternate site of access would be:

- Maple Road connection to existing US 31 near West 4A Road
- Maple Road connection to West 2C Road
- Quinn Trail connection to existing US 31
- Existing US 31 connection to Main Street north of Kern Road
- Existing US 31 connection to Hildebrand Street south of Johnson Road





- Connection between Johnson Road and West Ritter Avenue to Main Street
- Main Street connection to Jackson Road

There will be public roads that are not listed as a likely interchange or grade separation (overpass) location or listed as a road likely to be relocated to an alternate access point. Access across the new freeway for these roads will be eliminated and a cul-de-sac constructed on either side of the new freeway. It is anticipated that there will be 10 such public roads along Alternative E. However, the details of access will be refined as the project advances through the development phases. Roadways likely to lose access and be terminated with a cul-de-sac would be:

- West 7B Road
- West 5A Road
- Existing US 31 near 4A Road
- West 2C Road
- West 1B Road
- Shively Road
- Osborne Road
- Louise Drive
- Roycroft Road
- Jewell Avenue

In addition to the likely locations of interchanges, grade separations, and road closures, there would also be a grade separation for a railroad crossing at the following location:

- CSX Railroad on the north edge of LaPaz, between West 1B Road and East 1st Road

### 3.3.4 Alternative G-Cs (Freeway Alternative)

Alternative G-Cs begins at the existing US 31 and US 30 interchange, utilizing the existing cloverleaf configuration, and proceeds northward along the existing US 31 alignment to just south of West 4A Road in Marshall County, just south of LaPaz. It then continues northward on new alignment east of LaPaz and parallels existing US 31. Just south of the Marshall-St. Joseph County line, the alternative assumes a northeasterly direction around the east side of Riddles Lake, where it then continues in a northerly direction bypassing Lakeville on the east and paralleling existing US 31. Near Miller Road, the alternative turns in a northwesterly direction and crosses to the west side of existing US 31 just south of Roosevelt Road. The alternative then turns in a northerly direction, paralleling existing US 31, and terminates at US 20, approximately one mile west of the existing US 31 and US 20 interchange.

The proposed facility would require existing intersections and access points to be converted to interchanges, overpasses (grade-separations), or access closures. See Section 5.1, Traffic and Transportation, for a more detailed



description of the alternative and associated access points.

It is anticipated that there will be five new interchanges along Alternative G-Cs, not including the use of the existing interchange at US 30 and US 31 or modifications required at the existing US 31 and US 20 interchange. All anticipated interchange locations and types are conceptual and will be refined in later phases of the project development. Likely interchange locations and types would be:

- Utilize existing interchange at US 30
- Diamond interchange at the Marshall County proposed extension of 7th Road
- Diamond interchange at US 6 (with provisions for a potential future partial cloverleaf)
- Diamond interchange at SR 4 (Pierce Road)
- Diamond interchange at Kern Road
- Trumpet interchange at US 20
- Modify existing interchange at existing US 31 and US 20

There will be grade separations (overpasses) and local service (frontage) roads for many public roads intersecting with US 31 and not listed as a likely interchange location. It is anticipated that there will be 14 grade separations along Alternative G-Cs, including an additional reconstruction of the existing grade separation at Linden Road over US 20 due to the addition of ramp lanes along US 20 associated with the new interchange; however, the details of access will be refined as the project advances through the development phases. Likely grade separation locations would be:

- Plymouth-Goshen Trail
- Lilac Road/West 6th Road
- West 4A Road
- West 3A Road
- East 1st Road
- Tyler Road
- Kenilworth Road
- Lake Trail
- New Road



- Miller Road
- Existing US 31 south of Kern Road
- Roosevelt Road
- Johnson Road
- Linden Road over US 20 reconstruction

There will be public roads that are not listed as a likely interchange or grade separation (overpass) locations. When two public roads are close to one another, a grade separation may be provided at one road and the other road relocated to use the same grade separation. Frontage or local service roads are provided where land may be landlocked by full access control of the alternative. It is anticipated that there will be four such public roads along Alternative G-Cs that will likely be relocated to an adjacent overpass. However, the details of access will be refined as the project advances through the development phases. Likely road relocation locations to an alternate site of access would be:

- Maple Road connection to existing US 31 near West 4A Road
- Maple Road connection to West 2C Road
- North Lilac Road connection to Tyler Road
- Linden Road connection to Johnson Road

There will be public roads that are not listed as a likely interchange or grade separation (overpass) location or listed as a road likely to be relocated to an alternate access point. Access across the new freeway for these roads will be eliminated and a cul-de-sac constructed on either side of the new freeway. It is anticipated that there will be nine such public roads along Alternative G-Cs; however, the details of access will be refined as the project advances through the development phases. Roadways likely to lose access and be terminated with a cul-de-sac would be:

- West 7B Road
- West 5A Road
- Existing US 31 near 4A Road
- West 2C Road
- West 1B Road
- Linden Road
- Rockstroth Road
- Quinn Road
- Osborne Road



In addition to the likely locations of interchanges, grade separations and road closures, there would also be two grade separations for railroad crossings at the following locations:

- CSX Railroad on the north edge of LaPaz, between West 1B Road and East 1st Road
- Abandoned Railroad corridor just south of US 20

### 3.3.5 Alternative G-Es (Freeway “Hybrid” Alternative)

Alternative G-Es begins at the existing US 31 and US 30 interchange, utilizing the existing cloverleaf configuration, and proceeds northward along the existing US 31 alignment to just south of West 4A Road in Marshall County, just south of LaPaz. It then continues northward on new alignment east of LaPaz, paralleling existing US 31. Just south of the Marshall-St. Joseph County line, the alternative assumes a northeasterly direction east of Riddles Lake, and then continues north, east of Lakeville, paralleling existing US 31. Near Miller Road, the alternative turns in a northwesterly direction and crosses existing US 31 just south of Roosevelt Road. As the alternative approaches Kern Road, it assumes a northeasterly direction and ties into existing US 31, just north of Kern Road. It then follows existing US 31 northward and terminates at the existing US 31 and US 20 interchange location. It should be noted that Alternative G-Es between Kern Road and the US 31/US 20 interchange includes the same modifications as those made to Alternative Es, as discussed in Section 3.2.2.4, to be an “at grade” facility and not an elevated roadway, constructed on retaining walls.

The proposed facility would require existing intersections and access points to be converted to interchanges, overpasses (grade separations), or access closures. See Section 5.1, Traffic and Transportation, for a more detailed description of the alternative and associated access points.

It is anticipated that there will be five new interchanges along Alternative G-Es, not including the use of the existing interchange at US 30 and US 31 or modifications required at the existing US 31 and US 20 interchange. All anticipated interchange locations and types are conceptual and will be refined in later phases of the project development. Likely interchange locations and types would be:

- Utilize existing interchange at US 30
- Diamond interchange at the Marshall County proposed extension of 7th Road
- Diamond interchange at US 6 (with provisions for a potential future partial cloverleaf)
- Diamond interchange at SR 4 (Pierce Road)
- Diamond interchange at Kern Road
- Reconstruction of the existing interchange at existing US 31 and US 20



There will be grade separations (overpasses) and local service (frontage) roads for many public roads intersecting with US 31 and not listed as a likely interchange location. It is anticipated that there will be 16 grade separations along Alternative G-Es; however, the details of access will be refined as the project advances through the development phases. Likely grade separation locations would be:

- Plymouth-Goshen Trail
- Lilac Road/West 6th Road
- West 4A Road
- West 3A Road
- East 1st Road
- Tyler Road
- Kenilworth Road
- Lake Trail
- New Road
- Miller Road
- Existing US 31 south of Kern Road
- Roosevelt Road
- Main Street
- Johnson Road
- Johnson Road bridge over Main Street
- Jackson Road

There will be public roads that are not listed as a likely interchange or grade separation (overpass) locations. When two public roads are close to one another, a grade separation may be provided at one road and the other road relocated to use the same grade separation. Frontage or local service roads are provided where land may be landlocked by full access control of the alternative. It is anticipated that there will be seven such public roads along Alternative G-Es that will likely be relocated to an adjacent overpass. However, the details of access will be refined as the project advances through the development phases. Likely road relocation locations to an alternate site of access would be:

- Maple Road connection to existing US 31 near West 4A Road
- Maple Road connection to West 2C Road



- North Lilac Road connection to Tyler Road
- Existing US 31 connection to Main Street north of Kern Road
- Existing US 31 connection to Hildebrand Street south of Johnson Road
- Connection between Johnson Road and W. Ritter Avenue to Main Street
- Main Street connection to Jackson Road

There will be public roads that are not listed as a likely interchange or grade separation (overpass) location or listed as a road likely to be relocated to an alternate access point. Access across the new freeway for these roads will be eliminated and a cul-de-sac constructed on either side of the new freeway. It is anticipated that there will be 10 such public roads along Alternative G-Es; however, the details of access will be refined as the project advances through the development phases. Roadways likely to lose access and be terminated with a cul-de-sac would be:

- West 7B Road
- West 5A Road
- Existing US 31 near 4A Road
- West 2C Road
- West 1B Road
- Linden Road
- Rockstroth Road
- Quinn Road
- Osborne Road
- Jewell Avenue

In addition to the likely locations of interchanges, grade separations and road closures, there would also be a grade separation for a railroad crossing at the following location:

- CSX Railroad on the north edge of LaPaz, between West 1B Road and East 1st Road